## Comments

L-0012/001

Many of the possible solutions for treating, storing or burying solid wastes from other weapons sites at the Hanford Nuclear Reservation appear to embody some the public's values expressed over the years and at last summer's first hearings on the EIS. However, our buy-off on whatever alternative you decide upon rests upon our ability to trust the promises of the Department of Energy. This is difficult at a time when the DOE stops cleanup work, based on a directive from the Washington Department of Ecology because you "must comply". Yet over the years and even in this new document, you capriciously pick and choose which laws to comply with, and which to change without going through the proper legal steps.

L-0012/005

Throughout this document, the Department has interwoven many of the premises put forth in last year's Performance Management Plan that proposed cost saving measures that play havoc with current laws.

TSE-0011/001

I notice that there has been a significant tone of the discussion, alteration in the last few months, and it seems to me that we get the impression that the administration is moving by "Fiat" [Fiat is a sports car]. This seems to be that this "Fiat" is on the fallacy of the accelerated plan, which is to use a whole lot less money and do things quicker.

## Response

DOE is committed to cleaning up the Hanford Site in accordance with the Tri-Party Agreement (TPA) and applicable environmental requirements under federal and state laws and regulations. A lot in the way of cleanup has happened at Hanford over the last decade. Portions of the site have already been cleaned up, removed from the National Priority List (NPL), and released for other uses (e.g., the 1100 Operable Unit).

Volume I Section 6 identifies the major statutes, permits, compliance agreements, and regulatory requirements followed in conducting operations at Hanford Site. Statutes include AEA, CERCLA, RCRA and the State of Washington Hazardous Waste Management Act. Volume I Section 6.3 discusses the TPA. Volume I Section 6.4 discusses the Dangerous Waste Management permit. Volume I Section 6.19 provides a summary of existing and potential permits (including state approved permits where state decision-making will be necessary) required to construct and operate treatment, storage, and disposal facilities related to the HSW EIS alternatives. Volume I Section 6 has been updated and revised in response to comments in the final HSW EIS.

The Hanford Performance Management Plan (DOE-RL 2002) is discussed in Volume I Section 1.4.4 and Volume II Appendix N.

## Comments

TSE-0027/007

The health effects of company staff were higher than those of DOE staff. Why? Shouldn't we be doing something about this and requiring the companies to be more careful? And have their employees have less exposure?

## Response

Clean up of the Hanford Site has been and will continue to be subject to regulatory dose requirements and ALARA (as low as reasonably achievable) principles. All DOE and contractor staff must follow the same DOE occupational safety and health requirements.

## Comments

P-0008/003

ENOUGH LEAKING CONTAINERS.

P-0019/001

Nuclear waste destroys lives and wastes money.

P-0103/001

DO THE RIGHT THING, NOT JUST BAD SCIENCE RIGAMOROLE TO MEET THE BUSH ADMINISTRATION'S AGENDA THAT IS SELLING US DOWN THE RIVER

## Response

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DOE is responsible for the cleanup of dozens of sites around the country. DOE's approach is to consolidate and dispose of radioactive waste from all its cleanup efforts in the safest and most cost-effective manner possible. Hanford and other sites would be available for the disposal of low-level waste and mixed low-level waste; WIPP is used for the disposal of TRU waste; Yucca Mountain is expected to be used for the disposal of high-level waste and spent nuclear fuel. Many more curies of waste will be sent offsite from Hanford than will be received from offsite. Analysis indicates that these wastes could be handled without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities.

The Hanford clean-up effort is expected to be completed in 2035, followed by a long-term stewardship program that ensures waste remaining onsite is appropriately managed.

## Comments

TSE-0025/001

Whatever you subsidize, you are encouraging somebody to go ahead and waste it. And in this case, the federal government, the Department of Energy is proposing to subsidize the production of nuclear garbage. They are saying, go ahead and produce it, we're going to let somebody else pay for it, somebody else somewhere down the road.

## Response

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the Hanford Site is being studied and remediated by the ongoing CERCLA program in accordance with the Tri-Party Agreement. See Volume II Appendix N, Section N.2.4. See Volume III Section 2.0, Item 6 of the CRD for more examples of cleanup at Hanford.

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Charging DOE waste generators higher disposal costs is not expected to reduce the amount of waste generated by DOE sites or to increase the amount of waste reduction already occurring under the DOE pollution prevention and waste minimization program. The Pollution Prevention Act, Section 6002 of RCRA and several executive orders were enacted, in part, because it was recognized that (1) government organizations should make efforts to minimize the amount of waste they generate and (2) economic incentives generally do not work for government entities. For waste being disposed of at Hanford, the waste generator and the disposal facility are both part of the same government organization, the DOE. Although private companies can collect money today for work to be performed in later years, government organizations like DOE are precluded from collecting money to cover future costs (such as closure costs and long-term monitoring costs) without specific congressional approval.

The recent "Report to Congress - The Cost of Waste Disposal: Life Cycle Cost Analysis of Disposal of Department of Energy Low-Level Radioactive Waste at Federal and Commercial Facilities" (DOE 2002d) explains that waste disposal decisions should be made based on the total life-cycle cost of waste disposal. These decisions need to consider the costs for treatment, inspection and verification, disposal, closure, and long-term monitoring. The DOE pollution prevention and waste minimization program already requires waste disposal decisions to be made based on life-cycle costs and other factors. See Volume I Section 2.2.5 for a discussion of the DOE pollution prevention/waste minimization program.

## Comments

L-0027/005

The DOE is morally and legally obliged to live up to the Tri-Party agreement to meet all deadlines for vitrification and not try to escape its obligations by reclassifying deadly waste as harmless.

## Response

DOE is committed to cleaning up the Hanford Site in accordance with the Tri-Party Agreement (TPA) and applicable environmental requirements under federal and state laws and regulations. As of February 1, 2003, DOE had met 99% of its TPA milestones on or ahead of schedule. A lot in the way of cleanup has happened at Hanford over the last decade. Portions of the site have already been cleaned up, removed from the National Priority List (NPL), and released for other uses (e.g., the 1100 Operable Unit). As part of the river corridor cleanup, DOE is remediating contaminated soil sites, decommissioning the plutonium production reactors and associated facilities, removing production reactor fuel from the K Basins to interim storage in the 200 Area, and treating groundwater contaminated by past operations. Groundwater contamination beneath the Hanford Site is being studied and remediated by the ongoing CERCLA program in accordance with the Tri-Party Agreement. See Volume II Appendix N, Section N.2.4. See Volume III Section 2.0, Item 6 of the CRD for more examples of cleanup at Hanford.

## Hanford Cleanup

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The Hanford clean-up effort is expected to be completed in 2035, followed by a long-term stewardship program that ensures waste remaining onsite is appropriately managed.

The HSW EIS proposes no changes regarding the classification of high-level waste.

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### Comments

L-0038/002

On another subject, since I am a Washingtonian, the milestones for clean-up of the contaminated Hanford Nuclear Reservation have not been met. In view of that fact, it is inconceivable to even consider bringing in more waste to Hanford.

### Response

DOE recognizes that the cleanup of Hanford is a complex effort and is committed to it through the TPA process. As of February 1, 2003, DOE had met 99% of its TPA milestones on or ahead of schedule.

The Hanford area has been extensively studied and determined to be suitable for disposal of DOE and commercial waste. The impacts of disposing various quantities and types of waste are discussed in this HSW EIS as well as previous NEPA documentation. See Volume I Section 1.5.

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### Comments

P-0133/001

The Revised Draft EIS indicates that the US DOE plans to send more solid wastes to Hanford. Although it is commendable that you will send the wastes to a national repository eventually, it is not logical to add more wastes to Hanford until after you have removed what is already there.

### Response

The HSW EIS evaluates several alternatives for the storage, treatment, and processing of waste from onsite and offsite generators. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities.

The total amount of radioactivity expected to leave Hanford is much greater than the amount of radioactivity expected to come to Hanford. About 400 MCi of radioactivity are currently onsite. About 375 MCi are expected to be shipped to the Waste Isolation Pilot Plant in New Mexico, the geologic repository for spent nuclear fuel and high-level waste proposed for Yucca Mountain in Nevada, and other places. Less than 10 MCi would be expected to come to Hanford even if all the offsite waste evaluated in this HSW EIS were to come to Hanford. See Volume I Section 1 Figure 1.4.

## Comments

L-0012/004

This EIS does not address the issue of digging up and treating waste from the Hanford Burial grounds. It shows the uses of unlined trenches for waste burial. How can we use existing land and facilities for imported waste when we have yet to treat and dispose of the myriad volumes of our own waste to an acceptable degree of protection?

## Response

TPA Milestone M-15-00C requires all 200 Area, non-tank farm, pre-record of decision site investigation activities to be completed by December 31, 2008. Site characterization information generated from TPA remedial investigation and LLBG RCRA permitting activities has been used in development of the HSW EIS.

Retrieval of TRU waste from the LLBGs has already started. Shipments of TRU waste from Hanford to WIPP have also started. As indicated in the Hanford Performance Management Plan ( HPMP, DOE-RL 2002), approximately one-third of the containers (fifteen thousand containers) of suspect TRU waste from the LLBGs are scheduled to be retrieved by 2006 . No substantial releases are expected to occur before the waste is retrieved.

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The Hanford clean-up effort is expected to be completed in 2035, followed by a long-term stewardship program that ensures waste remaining onsite is appropriately managed.

The preferred alternative as described in Volume I Section 3.7 is to dispose of low level waste in newly constructed lined disposal facilities as soon as they are available. For purposes of analysis the HSW EIS assumes this would occur by 2007. MLLW is currently being, and will continue to be, disposed of in lined facilities.

However, the use of unlined trenches for disposal of low level waste is an established, legal, and environmentally protective method of low level waste disposal at both DOE and commercial facilities. As such, it is a reasonable alternative, under CEQ regulations, and must be analyzed. The HSW EIS considers a wide range of alternatives for disposal of low level waste in both lined and unlined facilities. Lined trench alternatives include leak detection and leachate collection capabilities. In addition, groundwater monitoring

would be done in compliance with applicable RCRA and State hazardous waste, TPA, and DOE requirements to validate the performance of the disposal facilities.

The Hanford Only waste volume has been evaluated in all action alternatives and the No Action Alternative to provide a better comparison with the impacts of adding offsite waste. The incremental impacts of offsite waste are the differences between the Lower and Upper Bound Volumes and the Hanford Only impacts for a given alternative.

## Comments

L-0043/003

Citizens by the thousands - who live in the area - have given comments, testimony. The single message has been loud and clear. [The] cleanup of existing dangerous, leaking, explosive-prone wastes needs to be top priority.

## Response

Environmental cleanup is DOE's top priority at Hanford and other DOE sites.

DOE is committed to cleaning up the Hanford Site in accordance with the Tri-Party Agreement (TPA) and applicable environmental requirements under federal and state laws and regulations. As of February 1, 2003, DOE had met 99% of its TPA milestones on or ahead of schedule. A lot in the way of cleanup has happened at Hanford over the last decade. Portions of the site have already been cleaned up, removed from the National Priority List (NPL), and released for other uses (e.g., the 1100 Operable Unit). As part of the river corridor cleanup, DOE is remediating contaminated soil sites, decommissioning the plutonium production reactors and associated facilities, removing production reactor fuel from the K Basins to interim storage in the 200 Area, and treating groundwater contaminated by past operations. Groundwater contamination beneath the Hanford Site is being studied and remediated by the ongoing CERCLA program in accordance with the Tri-Party Agreement. See Volume II Appendix N, Section N.2.4. See Volume III Section 2.0, Item 6 of the CRD for more examples of cleanup at Hanford.

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## Comments

TSE-0035/001

People are tired of talking about cleanup. Well, these are things that last for, you know, hundreds and thousands of years. So, it isn't like you can be real fast with this. So accelerated is an American way, by God, we are impatient, we are going to accelerate. But I want to hear the word quality, and safety, and I could care less about the acceleration I am feeling. I am on the Hanford Advisory Board. I am getting a gut feeling very strongly, accelerated means less. Accelerated I think is meaning less, translated. So, if slowness is just apathy, not doing nothing, is bad, but if slower means cautious, and quality, and protecting the water, protecting the workers' health, protecting the public health, and protecting the ecosystem, then not so accelerated is better. So this unGodly worship of the word acceleration I question, because I am afraid acceleration means less.

## Response

Environmental cleanup is DOE's top priority at Hanford and other DOE sites.

DOE is committed to openness and public involvement in its decision making. The DOE revised the HSW EIS in order to respond to public, tribal and regulator requests, and then held six public meetings to receive comments on the revisions. The DOE plan to accelerate cleanup is based, in part, on the requests of stakeholders who have repeatedly expressed concern that the effort is proceeding too slowly. The Hanford Performance Management Plan is also consistent with stakeholder input that DOE should give priority to reducing risk and cleaning up along the river corridor. Although the plan was developed in a relatively short time, it was based on input from the public in concert with regulatory agencies and others during the year-long Constraints and Challenges to Cleanup Team (C3T) process. Public involvement in DOE decision making is critical, and DOE will continue to seek input as Hanford cleanup progresses.

DOE is committed to cleaning up the Hanford Site in accordance with the Tri-Party Agreement (TPA) and applicable environmental requirements under federal and state laws and regulations. As of February 1, 2003, DOE had met 99% of its TPA milestones on or ahead of schedule. A lot in the way of cleanup has happened at Hanford over the last decade. Portions of the site have already been cleaned up, removed from the National Priority List (NPL), and released for other uses (e.g., the 1100 Operable Unit). As part of the river corridor cleanup, DOE is remediating contaminated soil sites, decommissioning the plutonium production reactors and associated facilities, removing production reactor fuel from the K Basins to interim storage in the 200 Area, and treating groundwater contaminated by past operations. Groundwater contamination beneath the Hanford Site is being studied and remediated by the ongoing CERCLA program in accordance with the Tri-Party Agreement. See Volume II Appendix N, Section N.2.4. See Volume III Section 2.0, Item 6 of the CRD for more examples of cleanup at Hanford.

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## Comments

L-0005/002

Unlined trenches provide no protection from soil and groundwater contamination. Contaminated groundwater would flow into the Columbia River for thousands of years! Birth defects and cancer would be our legacy to countless future generations in the Columbia Basin and beyond.

TSE-0012/006

You once told us it would take 2000 years for these contaminants to reach the Columbia River. It didn't. Groundwater, or water quality, potable water quality, will be a major issue in the United States within 40 years. It may be a much more serious issue than energy, which seems to pre-occupy us all at the present time. And finally, I regret to say that you have no credibility. You have contracted to clean up the Hanford soils by 2018, but you propose to carry on putting materials in unlined trenches until the year 2046.

## Response

The preferred alternative as described in Volume I Section 3.7 is to dispose of low level waste in newly constructed lined disposal facilities as soon as they are available. For purposes of analysis the HSW EIS assumes this would occur by 2007. MLLW is currently being, and will continue to be, disposed of in lined facilities.

However, the use of unlined trenches for disposal of low level waste is an established, legal, and environmentally protective method of low level waste disposal at both DOE and commercial facilities. As such, it is a reasonable alternative, under CEQ regulations, and must be analyzed. The HSW EIS considers a wide range of alternatives for disposal of low level waste in both lined and unlined facilities. Lined trench alternatives include leak detection and leachate collection capabilities. In addition, groundwater monitoring would be done in compliance with applicable RCRA and State hazardous waste, TPA, and DOE requirements to validate the performance of the disposal facilities.

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The HSW EIS evaluates impacts to the Columbia River and downstream populations for about 10,000 years.

## Hanford Cleanup

For all alternatives analyzed in this HSW EIS, DOE has analyzed the long-term movement of contaminants through soil and groundwater to the Columbia River. In all cases, it found that the water quality of the Columbia River would be virtually indistinguishable from the current river background levels. The concentrations of all the constituent contaminants were well below benchmark drinking water standards at a hypothetical well located near the Columbia River. The impacts of groundwater reaching the river are discussed in Volume I Sections 5.3 and Volume II Appendix G. See also Volume I Section 5.11 and 5.14 and Volume II Appendixes F and L.

Contaminants from solid waste are expected to move slower than contaminants from liquid waste disposal. Because the contaminants arrive at different times, contaminants from solid waste disposal actions evaluated in this EIS would not result in exceeding benchmark drinking water standards at the 1-km and Columbia River lines of analysis. Cumulative groundwater impacts are discussed in Volume I Section 5.14.3 and Volume II Appendix L.

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### Comments

P-0023/001

Please stop dumping Radioactive waste at Hanford... Human health is already threatened by the contaminated groundwater and will take forever to clean up. Save the Columbia River and the future of the Hanford Reach.

### Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

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future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities.

The Hanford clean-up effort is expected to be completed in 2035, followed by a long-term stewardship program that ensures waste remaining onsite is appropriately managed.

## Comments

E-0029/001

I very strongly do not want waste from other states being sent to Hanford.

E-0030/001

As a resident of Washington, I urgently request that you prevent any more nuclear waste coming to Hanford. Residents of our state are already living with the negative health results of too much nuclear in their air and water and ground.

E-0034/001

We are Washington State residents who are concerned about the use of Hanford as a nuclear waste dump. We wish to see all dumping of nuclear waste stopped on the Hanford Reserve, and continued cleanup of past activity. Hanford is a poor choice as a dump site primarily because of its proximity to the Columbia River. Washington State has provided waste storage long enough. Let some other state take the responsibility from now on.

F-0020/001

Storing additional waste at Hanford is unacceptable.

F-0020/002

This area is already the number 1 waste / contamination site in the country. Adding more waste would go against prior agreements and public opinions.

F-0023/002

We do not want any more waste brought into Hanford from anywhere.

F-0024/004

No more waste transported and dumped with an inadequate SWEIS at Hanford.

F-0025/008

The NW region must be rendered safe from present contamination and not be further made into a national dump.

F-0031/002

70,000 TRUCKLOADS of Radio-active Waste - What the hell [sic] is happening here?

L-0029/005

It seems to me instead of bringing more poison to an area so close to a major river, covered by a major flood in the past with seeps, springs and unknown water table, plans would be made to remove to a more arid, stable site, like the national repository in New Mexico.

L-0030/005

Please reconsider and prepare an EIS that protects the Hanford site and that forbids additional dumping from other states.

L-0032/004, LM-0005/004, LM-0006/004, LM-0007/004, LM-0008/004, LM-0009/004, LM-0010/004, LM-0011/004, LM-0012/004, LM-0013/004, LM-0014/004, LM-0015/004, LM-0016/004

The eastern Washington shrub-steppe is a complex ecosystem, not a wasteland, and we don't want your waste. Eastern Washington is an agricultural mecca, dependent entirely on the Columbia, not a filter for your

plutonium. It does not take a scientist to realize such toxic waste should be stored away from a major waterway, so find someplace else for it

P-0146/001

It is my understanding that Hanford already has toxic/hazardous/radioactive wastes in unlined "graves" and that there are plans to bury some 50,000+ truckloads more in this manner. Please do not allow this to happen. Hanford's already a total environmental catastrophe and adding to it seems extremely counterintuitive.

P-0149/001

I urge you NOT to import any offsite waste to Hanford's already inadequate storage of radioactive waste. Clean up the mess that is already there-this is a priority. We do not need more river and soil contamination or risky transport of waste.

P-0153/001

NO WASTE TO HANFORD Please stop immediately any and all plans to transport waste to Hanford. … We still have not satisfactorily dealt with local issues involving nuclear waste.

P-0165/001

Stop using our state as a dumping ground!!

P-0166/001

Please do not make Hanford a national dump site.

TSE-0011/003

Hanford was not originally designed as a waste area. We have two other waste areas, Yucca Mountain, and the WIPP in New Mexico, which are actually designed as geologically safe areas to put waste. Hanford has in no way been designed for the placement of waste.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

DOE is committed to cleaning up the Hanford Site in accordance with the Tri-Party Agreement (TPA) and applicable environmental requirements under federal and state laws and regulations. As of February 1, 2003, DOE had met 99% of its TPA milestones on or ahead of schedule. A lot in the way of cleanup has happened at Hanford over the last decade. Portions of the site have already been cleaned up, removed from the National Priority List (NPL), and released for other uses (e.g., the 1100 Operable Unit). As part of the river corridor cleanup, DOE is remediating contaminated soil sites, decommissioning the plutonium production reactors and associated facilities, removing production reactor fuel from the K Basins to interim storage in the 200 Area, and treating groundwater contaminated by past operations. Groundwater contamination beneath the Hanford Site is being studied and remediated by the ongoing CERCLA program in accordance with the Tri-Party Agreement. See Volume II Appendix N, Section N.2.4. See Volume III Section 2.0, Item 6 of the

## Hanford Cleanup

CRD for more examples of cleanup at Hanford.

DOE is responsible for the cleanup of dozens of sites around the country. DOE's approach is to consolidate and dispose of radioactive waste from all its cleanup efforts in the safest and most cost-effective manner possible. Hanford and other sites would be available for the disposal of low-level waste and mixed low-level waste; WIPP is used for the disposal of TRU waste; Yucca Mountain is expected to be used for the disposal of high-level waste and spent nuclear fuel. Many more curies of waste will be sent offsite from Hanford than will be received from offsite. Analysis indicates that these wastes could be handled without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities.

The Hanford clean-up effort is expected to be completed in 2035, followed by a long-term stewardship program that ensures waste remaining onsite is appropriately managed.

The total amount of radioactivity expected to leave Hanford is much greater than the amount of radioactivity expected to come to Hanford. About 400 MCi of radioactivity are currently onsite. About 375 MCi are expected to be shipped to the Waste Isolation Pilot Plant in New Mexico, the geologic repository for spent nuclear fuel and high-level waste proposed for Yucca Mountain in Nevada, and other places. Less than 10 MCi would be expected to come to Hanford even if all the offsite waste evaluated in this HSW EIS were to come to Hanford. See Volume I Section 1 Figure 1.4.

DOE's radioactive waste will continue to be disposed of in several states around the country where there are existing DOE and commercial disposal facilities. See Volume I, Figure 1.2.

The shipment of LLW and MLLW to Hanford for treatment and disposal is consistent with existing NEPA documentation, including the WIPP SEIS and WM PEIS. The HSW EIS shows the impacts of receiving and disposing of LLW and MLLW, from other DOE sites, is small. See the discussion in Volume III Section 2.0, Item 1.

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### Comments

L-0030/001

There are so many reasons why this [additional waste importation] is not a good idea that it is difficult to comprehend how this plan would even be considered. Several years ago there were reliable reports of contamination of salmon from leaking, inadequate storage tanks which allowed seepage into the adjacent Columbia River. Adding more chemical and radioactive waste which will be there for thousands of years requires more thought on the part of the US Department of Energy.

### Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

The EPA Columbia River Basin Fish Contaminants Survey 1996-1998 (EPA 2002) was a study of organic,

metal, and radionuclide concentrations in 208 fish tissue samples collected from 24 locations on the Columbia, Snake, Yakima, Clearwater, Klickitat, Deschutes, Willamette and other rivers that drain the Columbia River Basin. Locations included the Hanford Reach of the Columbia River, artificial ponds on the Hanford Site, and the upper Snake River. Cancer risks were estimated for consumption of fish that were contaminated with radionuclides. These risks were small relative to the estimated risks associated with radiation from naturally occurring background sources, to which everyone is exposed. The levels of radionuclides in fish tissue from the Hanford Reach of the Columbia River and the ponds on the Hanford Site were similar to levels in fish from the Snake River. These estimates of risks were not combined with the potential risks from other chemicals, such as PCBs (Aroclors and dioxin-like PCBs), chlorinated dioxins and furans, and a limited number of pesticides. The potential cancer risks from consuming fish collected from Hanford Reach and the artificial ponds on the Hanford Site were similar to cancer risks in fish collected from the upper Snake River. EPA reported that the Yakima River and the Hanford Reach of the Columbia River tended to have higher concentrations of organic chemicals than other study sites. EPA also reported that the chemicals and or chemical classes that contributed the most to cancer risk for most of the resident fish were PCBs (Aroclors and dioxin-like PCBs), chlorinated dioxins and furans, and a limited number of pesticides. For most of the anadromous fish, the chemicals that contributed the most to cancer risk were PCBs (Aroclors and dioxin-like PCBs), chlorinated dioxins and furans, and arsenic. These chemicals occur in the Columbia River as a result of agricultural and industrial operations (pulp and paper plants, for example) and are very unlikely to be of Hanford origin. These chemicals would not exist in wastes proposed for future disposal at Hanford, or, if initially present, would be treated to reduce their mobility and toxicity to meet applicable standards prior to disposal.

The HSW EIS uses the definition of cumulative impact as defined by the CEQ Regulations (40 CFR 1508.7): "Cumulative impact" is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Potential cumulative impacts associated with implementing the HSW EIS alternative groups are summarized in Volume I Section 5.14. Past, current, and future Hanford activities include treatment and disposal of tank waste, CERCLA remediation projects, previously disposed of waste, decontamination and decommissioning of the Hanford production reactors and other facilities, waste in the PUREX tunnels, operation of a commercial LLW disposal facility by U.S. Ecology, and operation of the Columbia Generating Station by Energy Northwest. Cumulative impacts of storage, treatment, and disposal activities for a range of waste volumes are evaluated and expanded in the final HSW EIS. For most resource and potential impact areas, the combined effects from the alternative groups for the Hanford Only, Lower Bound and Upper Bound waste volumes, or for the No Action Alternative for the Hanford Only and Lower Bound waste volumes, when added to the impacts of these other activities, are small.

## Comments

TPO-0021/002

...it's [the EIS process is] a shell game. It's about money. It's about fast track and the importation of more poison waste to Hanford.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation

provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

The HSW EIS provides important environmental information to assist DOE in making decisions about site-specific storage, treatment, and disposal actions at Hanford.

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## Comments

E-0018/001

STOP further import of radioactive waste to this state and Hanford. Let other states deal with their own wastes. Washington is too beautiful to continue to be a dumping ground. What goes around comes around.

TPO-0013/002

I'm strongly opposed to importing any additional wastes into this region. This must not be the dumping ground for the entire nation.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

DOE's radioactive waste will continue to be disposed of in several states around the country where there are existing DOE and commercial disposal facilities. See Volume I, Figure 1.2.

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## Comments

P-0112/003

The mission at Hanford needs to be completely devoted to environmental stewardship & remediation, and should no longer be in the business of nuclear waste production or acceptance.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford.

## Hanford Cleanup

Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

Some additional wastes will be generated as part of the cleanup of Hanford Site and other DOE sites. However, plutonium production, the source of most of the waste created, has stopped at Hanford. TRU waste, high-level waste, and spent nuclear fuel will be sent to underground repositories in other states that have been designed to safely contain the waste.

The Hanford clean-up effort is expected to be completed in 2035, followed by a long-term stewardship program that ensures waste remaining onsite is appropriately managed.

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### Comments

L-0055/034

Another consideration is to conserve resources by characterizing and reducing the total amounts of nuclear and chemical wastes and to spread the burden of responsibility equitably across the system and not simply using storage at remote locations as the solution. This also requires accelerating planning and building the appropriate facilities to treat the waste and responding to many of the concerns and questions of other federal agencies, the States of Oregon and Washington, and Tribes.

### Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

Pollution prevention and waste minimization are discussed in Volume I Sections 2.2.5 and 5.18.1. NEPA documents related to this HWS EIS are discussed in Volume I Section 1.5. The WM PEIS and other NEPA documents identified in this HSW EIS evaluate alternatives for managing various DOE waste streams. DOE uses waste minimization methods where practicable to minimize waste management costs and to comply with RCRA waste minimization requirements.

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### Comments

E-0043/005, EM-0217/005, EM-0218/005, L-0056/005, LM-0017/005, LM-0018/005

The HSW EIS is based on a flawed and discredited study, the Waste Management Programmatic Environmental Impact Statement (WM PEIS). The WM PEIS contains insufficient analysis.

E-0047/003

The apparent assumption in the EIS that the WM PEIS provides adequate analysis for a decision to select Hanford as a national disposal site for LLW and MLLW is in error. The WM PEIS lacked the necessary detail and site-specific analysis to provide a basis for such a decision. The WM PEIS, for example,

admittedly failed to consider the effects of waste generated during environmental cleanup actions which are certain to pose potential cumulative effects in relation to the proposed management of LLW and MLLW.

L-0014/015, L-0022/015

Any final decision regarding low level and mixed waste disposal and shipment between sites must be based upon risk based analyses and long-term site utilization planning options.

L-0044/143

Among the reasons Ecology asserts that USDOE has failed to provide adequate NEPA coverage in the WM PEIS and the RHSW-EIS are the following:

• Extensive additional EISs were required for disposal of other classes of waste (WIPP SEIS II, Yucca Mountain EIS).

• NTS and other sites' site wide EIS's were cited in the WM-PEIS, but no such EIS existed for Hanford.

• The WM-PEIS did not have available the analytic tools to model releases to the environment used in the HSW-EIS, notably the SAC and its inventories.

• Potential exceedences of groundwater standards in the RHSW-EIS are quite different from those acknowledged in the WM-PEIS (e.g., Tc-99 vs. uranium).

• The TWRS-EIS addressed onsite storage of Immobilized Low Activity waste in its Record of Decision (64 FR 46661), not land disposal; therefore, it cannot be said to be adequate to evaluate long-term impacts.

• The WM-PEIS contained insufficient information about the Hanford site to enable assessment of site specific impacts that should have been considered before Hanford was selected for disposal of off-site waste.

L-0054/014

Eighth, USDOE failed to resolve the Yakama Nation's concerns regarding the Waste Programmatic EIS which USDOE is basing their actions here on.

L-0055/007

Contrary to discussions in this revised Draft HSWEIS this is an Environmental Justice Issue. To simply analyze the costs of the impacts to low income residents surrounding the Hanford site to determine there are no environmental justice issues without assessment of the national implications is inappropriate for a national decision. To analyze this project as a local issue without discussion and recognition of the national implications too narrowly limits the actual scope of this project.

L-0055/040

Coordination amongst the whole nuclear weapons clean up complex is needed to truly reduce costs and savings of resources. The Summary states that DOE supports the cleanup and early closure of other DOE sites across the country. Hanford is connected to and dependent on other sites. Hanford has "long received LLW, MLLW, and TRU waste from offsite sources." What available funding is provided to Hanford to aid them in the early closure of these other sites by accepting this offsite waste? Hanford is not the only facility designated to accept MLLW and LLW. The Nevada Test Site has also been designated to accept this waste. There should be an evaluation to compare which site has the least environmental impact and the least public health impact.

P-0076/002

A new location such as dry desert with no waterway should be considered and made the dumping site.

TSE-0039/001

It [the PEIS] didn't have the risk estimates for these various wastes [nuclear waste that is not only slated for Hanford but to be moved around the nation], it didn't have the arrows coming here, going there, it didn't have the information that we need to make decisions like we are being asked to make in this EIS. So when are we going to have the comprehensive publicly vetted national strategy on nuclear materials disposition for this country?

## Hanford Cleanup

### Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

The WM PEIS (DOE 1997b) was a comprehensive evaluation of DOE nationwide waste management. The WM PEIS evaluated a broad suite of alternatives for waste management across the DOE complex, including managing most waste at generator facilities, or consolidating waste management at fewer sites that have existing facilities suitable to accept waste from other facilities. The impacts of those alternatives were compared for a variety of waste volumes at different DOE sites, including larger quantities of waste than are evaluated in the HSW EIS. The general result of the WM PEIS was that radioactive and hazardous wastes generated at a DOE site should be disposed of at that site unless the site was not capable of or not technically able to support those actions. DOE determined there was sufficient information in the WM PEIS to support decisions regarding the sites that were suitable for long-term waste management missions. Those decisions included processing and disposing of Hanford waste at Hanford, and the importation of wastes from other sites that could not adequately handle them. A discussion of the WM PEIS is provided in Volume I Section 1.5. Decisions made as part of the WM PEIS made Hanford available for the disposal of low-level waste and mixed low-level waste from other DOE generators. The initial WM PEIS decisions related to LLW, MLLW, and TRU waste were issued between January 1998 and February 2000.

The HSW EIS uses the best available data, computer modeling, assumptions, and related methods to produce estimates of reasonably foreseeable environmental impacts. The modeling approach was consistently applied to each alternative, and it provided information that allowed comparison of the alternatives.

Risk analysis is used throughout the HSW EIS. See Volume I Section 5 in the EIS and Volume II Appendices F, G, H, I and L.

## Comments

E-0047/004

CRK [Columbia Riverkeepers] believes that given the existing contamination and impacts on ecological receptors, including salmonids and other aquatic species in the Columbia River, that DOE should not move forward with additional waste shipments to Hanford. Accordingly, DOE should revise the draft EIS to reflect a decision that DOE will direct its limited resources at cleaning up existing contamination at Hanford and not the treatment of additional off-site waste.

While including a limited recognition about the shipment of additional TRU waste to Hanford from off-site, the draft EIS fails to provide an adequate review of the site-specific effects of transporting, storing, treating, and managing additional off-site TRU waste to Hanford. If DOE plans to rely on the Solid Waste EIS to support such shipments it needs to closely consider in a detailed fashion consistent with NEPA such effects.

Question # 1- Does DOE plan to use the analysis in the draft EIS as a basis for allowing additional off-site TRU waste shipments to Hanford absent additional environmental review?

Although this is not clearly apparent in the draft EIS, the assessment of transportation impacts related to such shipments is wholly inadequate. The general non-site-specific analysis relied on ignores the requirements of NEPA and the unique conditions of waste transportation to Hanford that must be assessed.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

In response to public comments, DOE has conducted a route- and generator-specific offsite transportation analysis using updated highway routing and 2000 census data. See Volume I Section 5.8 and Volume II Appendix H. The potential impacts identified in the updated evaluation are similar to those presented in the WM PEIS (DOE 1997b) and the WIPP SEIS-II (DOE 1997c), and would not change conclusions or DOE-wide waste management decisions based on those studies.

The EPA Columbia River Basin Fish Contaminants Survey 1996-1998 (EPA 2002) was a study of organic, metal, and radionuclide concentrations in 208 fish tissue samples collected from 24 locations on the Columbia, Snake, Yakima, Clearwater, Klickitat, Deschutes, Willamette and other rivers that drain the Columbia River Basin. Locations included the Hanford Reach of the Columbia River, artificial ponds on the Hanford Site, and the upper Snake River. Cancer risks were estimated for consumption of fish that were contaminated with radionuclides. These risks were small relative to the estimated risks associated with radiation from naturally occurring background sources, to which everyone is exposed. The levels of radionuclides in fish tissue from the Hanford Reach of the Columbia River and the ponds on the Hanford Site were similar to levels in fish from the Snake River. These estimates of risks were not combined with the potential risks from other chemicals, such as PCBs (Aroclors and dioxin-like PCBs), chlorinated dioxins and

furans, and a limited number of pesticides. The potential cancer risks from consuming fish collected from Hanford Reach and the artificial ponds on the Hanford Site were similar to cancer risks in fish collected from the upper Snake River. EPA reported that the Yakima River and the Hanford Reach of the Columbia River tended to have higher concentrations of organic chemicals than other study sites. EPA also reported that the chemicals and or chemical classes that contributed the most to cancer risk for most of the resident fish were PCBs (Aroclors and dioxin-like PCBs), chlorinated dioxins and furans, and a limited number of pesticides. For most of the anadromous fish, the chemicals that contributed the most to cancer risk were PCBs (Aroclors and dioxin-like PCBs), chlorinated dioxins and furans, and arsenic. These chemicals occur in the Columbia River as a result of agricultural and industrial operations (pulp and paper plants, for example) and are very unlikely to be of Hanford origin. These chemicals would not exist in wastes proposed for future disposal at Hanford, or, if initially present, would be treated to reduce their mobility and toxicity to meet applicable standards prior to disposal.

## Comments

L-0044/144

The HSW-EIS fails to acknowledge that exclusion of off-site waste and/or disposal of Hanford wastes off-site are reasonable mitigation measures, should groundwater standards be exceeded when LLW and MLLW wastes are land disposed.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

Several mitigation measures have been built into the alternatives addressed in the final HSW EIS, including installation of barriers, liners, and leachate collection systems in disposal facilities; treatment of MLLW to meet applicable RCRA and state requirements; and in-trench grouting or use of HICs for Cat 3 LLW and MLLW. Revised analyses in the final HSW EIS indicate that such measures would reduce the estimated releases and levels of groundwater contamination. As set forth in Volume I Section 5.3, for the action alternatives, constituent concentrations in groundwater at 1 km from the disposal facilities are expected to be below the benchmark drinking water standards. Water quality in the Columbia River would be virtually indistinguishable from the current background levels.

## Comments

F-0007/001

Why does the DOE want to ship radioactive waste from facilities to Hanford and then let it sit for (?) [sic] years and then ship it to New Mexico?

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store

some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

These TRU wastes are not expected to be stored onsite for an extended period of time. However, they are expected to be stored above ground at the Central Waste Complex and T Plant and (in the case of remote handled, non-mixed TRU waste) underground in concrete boxes so that they will have no contact with the soil. The storage of these wastes will be monitored in compliance with applicable RCRA, State of Washington dangerous waste regulations, and/or DOE requirements.

Regarding TRU waste received from other sites, DOE plans to temporarily store this waste and prepare it for shipment to WIPP for disposal. The TRU waste will not be disposed of at Hanford.

## Comments

TSE-0022/001

And the really tragic part about this is, it's really not even about volume. Because we are talking about materials in such tiny, tiny amounts that one pound of plutonium, for instance, evenly divided among the lungs of the people of the planet earth, would kill everybody. So. Microscopic, miniscule quantities of some of this stuff, dangerous for thousands and thousands of years, and I don't think it's 30 and 40 years, I think it's probably 3,000 years of a half-life for most of these radionuclides, it's a real threat. And it's not enough. We've got to add more to it. We've got to bring in another 70,000 truck loads. And there's something wrong with this picture.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

## Comments

E-0023/001

I am writing in opposition to the plan to ship 70,000 plus truckloads of waste into Hanford.

E-0025/001

It is unsafe, and therefore unwise to ship 70,000 truckloads of radioactive waste to Hanford, which is ALREADY leaking radioactive waste.

The government needs to focus on cleaning up Hanford, not importing more toxic waste which poses the threat of accidents on the highways, and intensified toxic leaks in Hanford.

L-0009/001

I am writing to express my opposition to the USDOE plan to ship 70,000 truckloads of radioactive waste to Hanford.

P-0011/001

We here in Washington State and Oregon are greatly concerned about adding more contaminated waste to the area. We are alarmed by the plan to ship 70,000 loads (truck) of radioactive waste to Hanford.

P-0041/001

DOE's proposal to ship an additional 70,000 truckloads of radioactive waste to Hanford poses dangers to the people in Washington and Oregon, to future generations, and to the Columbia River watershed. The EIS should fully reflect these risks and identify other sites as well as mitigation plans for unavoidable damage.

P-0083/001

The plan to ship 70,000 truckloads of radioactive waste to Hanford defies understanding. It would destroy a precious treasure, the Columbia River and its basin. It would create a vast area of contaminated ground water and soils - rendered unfit for use by man and creatures for all time.

P-0085/001

I cannot imagine that you would consider shipping 70,000 more truckloads (or any at all!) to Hanford. What an uncalculated risk to our residents! Hanford is already the nation's worst contaminated site, & it is near the great Columbia River, a lifeline for the Northwest. The groundwater contamination is a real & present threat to all of us, plus fish & wildlife.

P-0122/001

Please do not allow 70,000 truckloads of radio-active material to be dumped at Hanford.

P-0136/001

Washington State is the most beautiful state in America. Thus, it broke my heart that the US DOE plans to ship 70,000 truckloads of Radioactive waste to Hanford. Please don't let this happen.

TSE-0030/003

Of course we should not bring in 70,000 truck loads of additional waste to the most contaminated site in the western world.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that

includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

The HSW EIS estimates that up to 33,900 shipments of LLW, MLLW, and TRU waste could be shipped to Hanford if the upper bound waste volumes are realized. The actual number of shipments is expected to be less than this.

The HSW EIS evaluates impacts to the Columbia River and downstream populations for about 10,000 years. For all alternatives analyzed in this HSW EIS, DOE has analyzed the long-term movement of contaminants through soil and groundwater to the Columbia River. In all cases, it found that the water quality of the Columbia River would be virtually indistinguishable from the current river background levels. The concentrations of all the constituent contaminants were well below benchmark drinking water standards at a hypothetical well located near the Columbia River. The impacts of groundwater reaching the river are discussed in Volume I Sections 5.3 and Volume II Appendix G. See also Volume I Section 5.11 and 5.14 and Volume II Appendixes F and L.

An expanded discussion of uncertainties associated with the HSW EIS impact analyses is included in Volume I Section 3.5.

## Comments

E-0043/074, EM-0217/074, EM-0218/074, L-0056/074, LM-0017/074, LM-0018/074

Also, the current "Upper Bound" (larger than expected estimate of the maximum expected volume of waste to be managed) potentially conceals, masks, or minimizes differences between and among the analyzed alternatives. EPA requires that site specific parameters be used in models. DOE should quantitatively analyze the alternatives using an accurate estimate (what DOE truly expects, explaining how it came to this expectation) of the maximum and minimum expected volumes to be managed.

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

Assumptions regarding waste volume identification and selection methodology are presented in Volume II Appendix C Section C.1.

## Comments

L-0055/059

According to the EIS, DOE will accept "some" LLW and MLLW from sites that do not have disposal capability. "Some" appears to be more volume than is currently at the Hanford site according to figure S.4. DOE does not know precisely how much waste Hanford will receive from offsite. This is somewhat disturbing. DOE has evaluated a range of waste quantities but they do not know precisely how much they have, let alone what they could receive. Is there an accounting problem with known volumes? What about deeper, contaminated vadose zone volumes? What contribution could this add?

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

Assumptions regarding waste volume identification and selection methodology are presented in Volume II Appendix C Section C.1.

The HSW EIS uses the definition of cumulative impact as defined by the CEQ Regulations (40 CFR 1508.7): "Cumulative impact" is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Potential cumulative impacts associated with implementing the HSW EIS alternative groups are summarized in Volume I Section 5.14. Past, current, and future Hanford activities include treatment and disposal of tank waste, CERCLA remediation projects, previously disposed of waste, decontamination and decommissioning of the Hanford production reactors and other facilities, waste in the PUREX tunnels, operation of a commercial LLW disposal facility by U.S. Ecology, and operation of the Columbia Generating Station by Energy Northwest. Cumulative impacts of storage, treatment, and disposal activities for a range of waste volumes are evaluated and expanded in the final HSW EIS. For most resource and potential impact areas, the combined effects from the alternative groups for the Hanford Only, Lower Bound and Upper Bound waste volumes, or for the No Action Alternative for the Hanford Only and Lower Bound waste volumes, when added to the impacts of these other activities, are small.

The HSW EIS uses best available data for estimating inventories of hazardous and radioactive wastes. These data are obtained from information management systems maintained at Hanford and other DOE sites. Most of the waste will be generated by environmental restoration activities, and there is uncertainty about the amounts that will be generated. Areas of uncertainty are discussed in Volume I Section 3.5.

## Comments

E-0043/050, EM-0217/050, EM-0218/050, L-0056/050, LM-0017/050, LM-0018/050

The single value used for the Hanford Only waste volume neglects the fact that not even DOE knows the true volume of waste currently at the Hanford Site. DOE states on page S.34 of the HSW EIS summary that "[w]aste site inventories, both in terms of chemical and radioactive contaminants, are not precisely known…" DOE should give a detailed quantitative breakdown of how DOE chose to use this single value for the Hanford Only waste volume. Additionally, DOE should provide a quantitative analysis throughout the HSW EIS using not only this single value, but also additional estimated values to account for the fact that DOE does not know the actual volume of waste currently at the Hanford Site.

E-0043/052, EM-0217/052, EM-0218/052, L-0056/052, LM-0017/052, LM-0018/052

The complete waste inventory should be presented in a temporal format to show the movement of waste from one storage status to another, the waste imports and exports from Hanford, the effect of treatment on the inventory, and the cumulative environmental releases over time. Such inventory should include: 1) identification of the waste by IUPAC [International Union of Pure and Applied Chemistry] nomenclature and CAS [Chemical Abstracts Service] number - wastes not in pure form should identify both chemical and/or radiological constituents of the waste; 2) location of the waste by latitude/longitude, by plane coordinates, and by DOE location names/numbers; 3) mass of the identified waste or waste constituent at each location in kilograms; 4) density of the identified waste or waste constituent at each location in grams/cubic centimeter; 5) activity of the identified waste or waste constituent at each location in grays; 6) storage status of identified waste or waste constituent at each location in terms of "contained-retrievable waste," "contained-non-retrievable waste," or "non-contained waste" (waste already in the environment).

## Response

Hanford is part of a nationwide cleanup effort of over 100 DOE sites and cooperates with these sites in the cleanup. As part of that effort, Hanford would receive some LLW, MLLW, and would temporarily store some TRU waste from other DOE sites, as well as send HLW, spent nuclear fuel, and TRU waste to other DOE sites. The HSW EIS evaluates a range of waste receipts at Hanford to encompass the uncertainties regarding quantities of waste that would ultimately be managed at the site. The waste volumes evaluated include a Lower Bound waste volume consisting mainly of Hanford waste, and an Upper Bound volume that includes additional quantities of offsite waste that Hanford might receive consistent with WM PEIS decisions. The HSW EIS includes an evaluation of Hanford Only waste. The Hanford waste evaluation provides a basis with which to determine the impacts of varying quantities of offsite waste at Hanford. Evaluations in the WM PEIS, the HSW EIS, and related NEPA documents indicate that additional wastes could be handled at Hanford without complicating future remediations, or diverting resources or disposal capacity from other Hanford cleanup activities. Information on the potential impacts of transporting waste has been revised and is presented in Volume I Section 5.8 and Volume II Appendix H.

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An expanded discussion of uncertainties associated with the HSW EIS impact analyses is included in Volume I Section 3.5.